

## R E M A R K S

This Amendment is responsive to the Office Action dated April 7, 2004.

Claims 1-8 are pending in the application. All of the claims are currently rejected under 35 U.S.C. 102(b) as being anticipated by Pfeiffer et al. U.S. Patent No. 6,083,102.

Responsive to the grounds for rejection of the claims, Applicant herein amends independent claims 1 and 6 to more clearly distinguish the invention of those claims over the cited prior art reference. All of the claims are now believed to be more patentably distinguishable over the cited prior art and allowable.

Turning to amended claim 1, that claim is directed to an extension for a helical flight extending around a front inlet end of a rotor of a threshing system of an agricultural combine. The rotor is rotatable in a predetermined rotational direction about a rotational axis therethrough. The flight includes a leading edge extending radially outwardly from the front inlet end of the rotor in a rearwardly facing helical crop flow surface extending rearwardly from the leading edge at a first predetermined angle of attack relative to a plane perpendicular to the rotational axis, for conveying crop materials from adjacent the inlet end of the rotor radially outwardly and rearwardly when the rotor is rotated.

Amended claim 1 requires the extension to include an elongate blade shape member

**removably mountable in radially outwardly extending relation along the radially outwardly extending leading edge of the flight, the blade shape member being disposed so as to be located forwardly of the leading edge of the flight with respect to the predetermined rotational direction along at least a substantial portion of a radial extent thereof when mounted thereon, the blade shape member having a leading edge having a curved swept back shape, and a rearwardly facing crop flow surface oriented at a second predetermined angle less than the first predetermined angle of attack, such that when the rotor is rotated in the predetermined direction, the member will accelerate crop material that comes into contact with the leading edge thereof radially outwardly and rearwardly onto the flight and generate a rearwardly directed air flow.**

This combination of elements of amended claim 1 is not disclosed, taught and/or suggested by the Pfeiffer et al. patent. More particularly, the mounting of the blade shaped member in radially outwardly extending relation along the radially outwardly

extending leading edge of the flight, as required in amended claim 1, is not disclosed in Pfeiffer et al. Referring to Fig. 2 of Pfeiffer et al., the mounting assemblies 52 include portions (identified by the leftmost number 52) which extend radially outwardly along substantially the entire radially outwardly extending leading edges of helical flights of infeed elements 42. However, such radially outwardly extending portions 52 are located rearwardly of the flights in regard to the rotational direction, not forwardly thereof as required in the claim. They thus will not function to accelerate crop material radially outwardly and rearwardly onto the flight, as also required in the claim.

Applicant observes that nothing extends radially outwardly along and forwardly of the radially outwardly extending leading edges of the flights of Pfeiffer et al. In Fig. 2 of Pfeiffer et al. reproduced in paragraph 2 of the Detailed Action section of the Office Action, the Examiner points to a rear flight as disclosing an elongate blade shape member & leading edge curved swept back shape. However, Applicant respectfully asserts that this is not located along the radially outwardly extending leading edge of the flight as now required by amendment in the claim, but instead is located along a radially outermost edge of the flight.

Because Pfeiffer et al. lacks anything whatsoever that extends radially outwardly and forwardly along the radially outwardly extending leading edge of the flights thereof, it also lacks anything having a rearwardly facing crop flow surface oriented at a second angle of attack less than a first angle of attack of the leading edges of the flights, as required in the claim.

Rearward portions 58 of the infeed elements 42 of Pfeiffer et al., shown in Fig. 2 and pointed to by the Examiner, include outermost portions 68 having rearwardly facing surfaces, but again, these are located radially outwardly of the flights a substantial distance from the radially outwardly extending leading edges of the flights.

For the foregoing reasons, all of the elements of amended claim 1 are not disclosed or even suggested in Pfeiffer et al. Accordingly, amended claim 1 is believed to be patentably distinguishable over Pfeiffer et al. and allowable.

Claims 2 though 5 depend from amended claim 1 and add further distinguishing limitations thereto. For instance, claim 3 requires the extension of claim 1 to include a hub mountable to the rotor and having a radially outwardly extending extension having a leading edge at least tangent to a curved radial outer periphery of the hub and extending radially outwardly to a radial inner edge of the blade member. These features are not present on the hub of Pfeiffer et al. Claim 5 requires the first angle of attack of the rearwardly facing helical crop flow surface of the flight of claim 1 to be about 135 degrees and the rearwardly facing crop flow surface of the blade shape member to be oriented at about a 147 degree angle to the rearwardly facing helical crop flow surface of the flight. These features are not disclosed in Pfeiffer et al. Accordingly, claims 2 through 5, in combination with the patentable limitations of amended base claim 1, are believed to be patentably distinguishable over Pfeiffer et al. and allowable.

Amended claim 6 is directed to a threshing rotor for a threshing system of an agricultural combine, requiring a front inlet section rotatable in a predetermined rotational direction about a rotational axis therethrough and a plurality of helical flights extending rearwardly and oppositely from the rotation direction around the inlet section, each of the flights including a front leading edge extending radially outwardly from a front end of the front inlet section and a rearwardly facing helical crop flow surface extending rearwardly from the leading edge at a first predetermined angle of attack of about 135 degrees relative to a plane perpendicular to the rotational axis. Amended claim 6 requires elongate blade shape extensions mounted in radially outwardly extending relation along **and forwardly of** the leading edge of each of the flights in the predetermined rotational direction, respectively, each of the extensions having

**a leading edge having a curved swept back shape and a rearwardly facing crop flow surface extending to the helical crop flow surface of the flight and oriented at a second predetermined angle of attack oriented at about a 147 degree angle relative thereto, such that when the rotor is rotated in the predetermined direction the extension will accelerate crop materials that comes into contact with the leading**

**edge thereof radially outwardly and rearwardly to the flight and generate a rearwardly directed air flow.**

Again, for the reasons set forth in respect to amended claim 1 above and incorporated herein by reference, namely, that Pfeiffer et al. does not include any blade shape extensions along and forwardly of the leading edges of the flights thereof, as required in the claim, amended claim 6 is believed to be patentably distinguishable over Pfeiffer et al. Pfeiffer et al. also does not disclose the claimed second angle of attack. Accordingly, amended claim 6 is believed to be allowable.

Claims 7 and 8 depend from amended claim 6 and add still further limitations thereto. For instance, claim 8 requires a hub mountable to the front inlet end and including a curved radial outer surface and radially outwardly extending extensions having leading edges at least generally tangent to the curved radial outer surface and extending radially outwardly to adjacent to radial inner edges of the blade shape extensions, respectively. Again, this is not disclosed in Pfeiffer et al. Accordingly, claims 7 and 8, in combination with amended base claim 6, are believed to be allowable.

It is now believed that all of the claims in the present application, namely, claims 1-8, contain limitations which patentably distinguish them over the cited prior art. None of the prior art of record discloses a rotor inlet flight extension having the features as set forth in the present claims, for the functional advantages and purposes set forth in the present specification. Therefore, favorable action and allowance of all of the claims is respectfully requested.

A one month extension of time is requested to extend the time for submitting this Amendment. The Office Action was mailed on April 7, 2004, and the initial three month period in which to submit a response ended on July 7, 2004. The one month extension of time extends the response time up to and including Saturday, August 7, 2004, and thus Monday, August 9, 2004. Enclosed is a check in the amount of \$110.00 which is the charge for an extension of one month as set forth in 37 CFR §1.17(a)(2) for a large entity.

The Commissioner is authorized to charge any credit or deficiency to Deposit Account  
No. 08-1280.

If the Examiner has any further requirements or suggestions for placing the  
present claims in condition for allowance, Applicant's undersigned attorney would  
appreciate a telephone call at the number listed below.

Respectfully submitted,

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